

CLAIMS:

I claim:

1. A pipe handling machine for moving a plurality of oilfield tubulars with respect to a rig floor, said pipe handling machine comprising:

5 an elongate moveable trough, said elongate moveable trough having a first lateral side and a second lateral side, said elongate moveable trough having a cross-sectional shape for receiving at least one oilfield tubular between said first lateral side and said second lateral side;

said elongate moveable trough being moveable to and from a first position away from
10 said rig floor and a second position adjacent said rig floor;

one or more powered units for raising and lowering said elongate moveable trough toward and away from said rig floor; and

a tilting mechanism for tilting said elongate moveable trough, said tilting mechanism being operable for tilting one lateral side to a higher elevation than the other lateral side.

15

2. The pipe handling machine of claim 1, wherein said pipe handling machine is operable from a remote location.

3. The pipe handling machine of claim 1, wherein said tilting mechanism is operable for
20 tilting said elongate moveable trough to thereby unload an oilfield tubular laterally from said elongate moveable trough.

4. The pipe handling machine of claim 1, wherein said tilting mechanism further comprises a first hydraulic lift engageable with said first lateral side.

5. The pipe handling machine of claim 1, wherein said tilting mechanism further comprises
5 a second hydraulic lift engageable with said second lateral side.

6. The pipe handling machine of claim 1, wherein said tilting mechanism is operable only when said elongate moveable trough is in said first position away from said rig floor.

10 7. The pipe handling machine of claim 1, further comprising one or more pipe lifting frames, each of said one or more pipe lifting frames further comprising a powered pipe lifter moveably mounted thereto, said powered pipe lifter being operable for lifting and lowering an oilfield tubular to and from said elongate moveable trough.

15 8. The pipe handling machine of claim 7, wherein said tilting mechanism is operable for tilting said elongate moveable trough to laterally unload said oilfield tubular from said elongate moveable trough to said powered pipe lifter.

9. The pipe handling machine of claim 7, further comprising a platform, and a lift frame
20 being pivotally moveable with respect to said platform, said one or more pipe lifting frames being affixable to said platform.

10. The pipe handling machine of claim 1, further comprising:

a lift frame, said elongate moveable trough being axially extendable and retractable with respect to said lift frame.

5 11. A pipe handling machine for moving a plurality of oilfield tubulars with respect to a rig floor, said pipe handling machine comprising:

a lift frame;

one or more powered units for raising and lowering said lift frame with respect to said rig floor;

10 an elongate moveable trough supported by said lift frame, said elongate moveable trough being axially extendable and retractable with respect to said lift frame, said elongate moveable trough being shaped internally for receiving and supporting at least one of oilfield tubulars; and
one or more powered units for axially extending and retracting said elongate moveable trough with respect to said lift frame by an extension length.

15

12. The pipe handling machine of claim 11, wherein said oilfield tubular is moveable toward or away from said rig floor by said extension length with little or no axial sliding movement occurring between an oilfield tubular carried by said elongate moveable trough and said elongate moveable trough while said elongate moveable trough operates to extend or retract by said

20 extension length.

13. The pipe handling machine of claim 11, further comprising a platform, said lift frame being pivotally moveable with respect to said platform for pivoting said lift frame in the direction of said rig floor, elongate moveable trough being axially extendable towards and away from said rig floor once said lift frame is in a selected pivotal position with respect to said platform.

5

14. The pipe handling machine of claim 11, further comprising a trough foot member mounted to an end portion of elongate moveable trough for supporting an end of an oilfield tubular positioned in said trough.

10 15. The pipe handling machine of claim 14, wherein said trough foot member is fixed in position with respect to said elongate moveable trough when said elongate moveable trough is extended and retracted with respect to said lift frame.

16. The pipe handling machine of claim 14, wherein said trough foot member is movably
15 mounted and wherein said trough foot member is adjustable to position varied length tubulars with respect to said elongate moveable trough.

17. The pipe handling machine of claim 11, further comprising a tilting mechanism for tilting said elongate moveable trough, said elongate moveable trough having a first lateral side and a
20 second lateral side, said tilting mechanism lifting one lateral side to a higher elevation than the other lateral side.

18. The pipe handling machine of claim 17, wherein said tilting mechanism is operable for tilting said elongate moveable trough to thereby unload an oilfield tubular laterally from said elongate moveable trough.

5 19. The pipe handling machine of claim 17, wherein said tilting mechanism further comprises a first hydraulic lift engageable with said first lateral side.

20. The pipe handling machine of claim 19, wherein said tilting mechanism further comprises a second hydraulic lift engageable with said second lateral side.

10

21. The pipe handling machine of claim 11, further comprising one or more pipe lifting frames, each of said one or more pipe lifting frames further comprising a powered pipe lifter moveably mounted thereto, said powered pipe lifter being operable for lifting and lowering an oilfield tubular to and from said elongate moveable trough.

15

22. The pipe handling machine of claim 11, further comprising a platform, said lift frame being pivotally moveable with respect to said platform, said one or more pipe lifting frames being affixable to said platform.

20 23. A method for picking up or laying down oil field tubulars with respect to a rig floor, comprising the following steps in any order:

positioning at least one oil field tubular on an elongate trough;

telescopingly extending or retracting said elongate trough with respect to a support frame;
and

raising or lowering said support frame to thereby effect said picking up or laying down
of said oil field tubular.

5

24. The method of claim 23, further comprising tilting one lateral side of said elongate trough
with respect to an opposite lateral side of said elongate trough.

25. The method of claim 23, further comprising mounting one or more lift frames to a
10 position adjacent said elongate trough when said elongate trough is retracted and lowered away
from said rig floor, and providing a moveable powered pipe lifter on each of said one or more
lift frames for moving said oilfield tubulars either to or away from said elongate trough.

26. A pipe handling machine for moving a plurality of oilfield tubulars with respect to a rig
15 floor, said pipe handling machine comprising:

an elongate moveable trough;

one or more powered units for raising and lowering a lift frame with respect to said rig
floor between a first position closer to said rig floor and a second position further away from said
rig floor with respect to said first position;

20 one or more pipe lifting frames affixed adjacent said second position;

a powered pipe lifter moveably mounted to each of said one or more pipe lifting frames,
said powered pipe lifter being operable for lifting and lowering an oilfield tubular towards and

away from said elongate moveable trough; and

a pivotal member pivotally connected to said powered pipe lifter, said pivotal member being operable for pivoting to a guiding position for guiding an oilfield tubular to roll laterally onto said elongate moveable trough when said powered pipe lifter is adjacent said elongate
5 moveable trough.

27. The pipe handling machine of claim 26, further comprising:

a lift frame, said elongate moveable trough being axially extendable and retractable with respect to said lift frame.

10

28. The pipe handling machine of claim 26, further comprising a platform, said lift frame being pivotally moveable with respect to said platform, said one or more pipe lifting frames being affixable to said platform.